# REPORT DOCUMENTATION PAGE

Form Approved OMB No. 0704-0188

maintaining

the data recorded and constation and advantage up to the state of the maintaini	ng
the data needed, and completing and reviewing this collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for	r -
reducing this burden to Department of Defense, Washington Headquarters Services, Directorate for Information Operations and Reports (0704-0188), 1215 Jefferson Davis Highway, Suite 1204, Artington	
22202-4302. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to any penalty for failing to comply with a collection of information if it does not disp	n, VA
Technique and a facility of the provision of taw, no person shall be subject to any penalty for railing to comply with a collection of information if it does not disp	lay a
currently valid OMB control number. PLEASE DO NOT RETURN YOUR FORM TO THE ABOVE ADDRESS.	•

1. REPORT DATE (DD-MM-YYYY)	2. REPORT TYPE	3. DATES COVERED (From - To)				
23-04-2004	Final Report	July 2003 to July 2004				
4. TITLE AND SUBTITLE		5a. CONTRACT NUMBER				
Managing Referrals to Boost Succ	5b. GRANT NUMBER					
Medical Center Portsmouth						
	5c. PROGRAM ELEMENT NUMBER					
6. AUTHOR(S)		5d. PROJECT NUMBER				
Greg S. Patterson, LT, MSC, USNR	5e. TASK NUMBER					
		5f. WORK UNIT NUMBER				
7. PERFORMING ORGANIZATION NAME(S)	AND ADDRESS(ES)	8. PERFORMING ORGANIZATION				
Naval Medical Center,		REPORT				
620 John Paul Jones Circle,						
Portsmouth, VA 23708-2197						
9. SPONSORING / MONITORING AGENCY NA	AME(S) AND ADDRESS(ES)	10. SPONSOR/MONITOR'S ACRONYM(S)				
US Army Medical Department Center and	School	(a)				
BLDG 2841 MCCS-HRA (Army-Baylor I	Program in Healthcare Administration)					
3151 Scott Road, Suite 1411	ŕ	11. SPONSOR/MONITOR'S REPORT				
Fort Sam Houston, TX 78234-6135		NUMBER(S)				
		32-04				
		1				

#### 12. DISTRIBUTION / AVAILABILITY STATEMENT

Approved for public release; distribution is unlimited

#### 13. SUPPLEMENTARY NOTES

#### 14. ABSTRACT

This study looks at three clinics; Cardiology, Orthopedics and Gastroenterology, and seeks ways to minimize the number of referrals to the civilian network while treating as many beneficiaries as possible within the MTF. The purpose of this study is to validate the gains or losses that have been made through the implementation of business plans by NMCP and to provide a foundation for subsequent and more detailed studies that would examine the methods and procedures implemented to manage referrals.

In summary, the three clinics, Orthopedics, Gastroenterology and Cardiology, have greatly reduced the number of referrals sent to the network. However, the significance of this change is not fully realized until the existing referrals expire.

The Statistics used in this study were derived from SPSS statistical software program, which provided a one-way analysis of variance and descriptive statistics for the dependent variables, referral visits and referral costs. As NMCP continues on its path toward reducing the number of referrals to the network, it must continue to track referrals and their associated costs. In the next few months, I firmly believe the clinics will start to achieve a further decrease in costs as evidenced by the reduction in referrals to the network.

## 15. SUBJECT TERMS

Managing Referrals, Revised Financing, Business Plans, Network Costs

16. SECURITY CLASSIFICATION OF:			17. LIMITATION OF ABSTRACT	18. NUMBER OF PAGES	19a. NAME OF RESPONSIBLE PERSON Greg S. Patterson
a. REPORT	b. ABSTRACT	c. THIS PAGE			19b. TELEPHONE NUMBER (include
UNCLASS	UNCLASS	UNCLASS	υL	34	area code) 757-436-1282

Running Head: MANAGING REFERRALS

# DISTRIBUTION STATEMENT A Approved for Public Release Distribution Unlimited

Managing Referrals to Boost Success under Revised Financing

at

Naval Medical Center Portsmouth

A Graduate Management Project Proposal

Submitted to the Faculty of

U.S. Army-Baylor University

by

LT Greg S. Patterson, MSC 23 April 2004

20050419 058

# Disclaimer Notice

The opinions or assertions contained herein are the private views of the author and are not to be considered as official policy or positions, or as reflecting the views of the Department of the Navy, the Department of Defense, the United States Government, or Baylor University.

## Acknowledgements

I would like to take this opportunity to thank the many people who have assisted me during this process to make my GMP a success. CDR Elizabeth Nelson, my preceptor who provided insight throughout my residency and guidance in choosing this topic. Captain Quinones who helped expose me to the many aspects of Health Care Management at Naval Medical Center Portsmouth and provided much insight into my final project. Additionally, I would like to thank Ed Weinberg for getting me started in the right direction, thanks Ed! I would also like to thank the staff of the Healthcare Business Operations Directorate, especially LCDR Karen Leahy, Paula Munden, Jackie Green and Patti Coco. Their commitment to their jobs and the outstanding working knowledge of the complex issues were of great benefit to my project. Also, my thanks go out to Dr. Mangelsdorff, my academic advisor, who provided me with support and information throughout this process. My appreciation and love also go out to my wife Carmen, my children Lauren and Audrey who sacrificed time away from me during these last two years to achieve this goal of a Masters Degree in Health Care Administration from Baylor University.

#### Abstract

This study looks at three clinics; Cardiology, Orthopedics and Gastroenterology, and seeks ways to minimize the number of referrals to the civilian network while treating as many beneficiaries as possible within the MTF.

The purpose of this study is to validate the gains or losses that have been made through the implementation of business plans by NMCP and to provide a foundation for subsequent and more detailed studies that would examine the methods and procedures implemented to manage referrals.

In summary, the three clinics, Orthopedics,

Gastroenterology and Cardiology, have greatly reduced the number of referrals sent to the network. However, the significance of this change is not fully realized until the existing referrals expire.

The Statistics used in this study were derived from SPSS statistical software program, which provided a one-way analysis of variance and descriptive statistics for the dependent variables, referral visits and referral costs.

As NMCP continues on its path toward reducing the number of referrals to the network, it must continue to track referrals and their associated costs. In the next few months, I firmly believe the clinics will start to achieve a further decrease in costs as evidenced by the reduction in referrals to the network.

# Table of Contents

Acknowledgements	3
Abstract	4
List of Figures and Tables	6
Introduction	7
Conditions that Prompted the Study	7
Statement of the Problem	10
Literature Review	10
Purpose	15
Methods and Procedures	16
Forecast	16
Ethical Concerns	18
Data Reliability	18
Results	19
Referral Patterns	19
Referral Costs	24
Discussion	28
Conclusion	30
Recommendations	31
References	33

# List of Figures and Tables

# Figures:

Figure 1: REVISED FINANCING REFERRALS ORTHOPEDICS	21
Figure 2: REVISED FINANCING REFERRALS GASTROENTEROLOGY	22
Figure 3: REVISED FINANCING REFERRALS CARDIOLOGY	23
Figure 4: REVISED FINANCING COSTS ORTHOPEDICS	25
Figure 5: REVISED FINANCING COSTS GASTROENTEROLOGY	26
Figure 6 REVISED FINANCING COSTS CARDIOLOGY	27
Tables:	
Table 1: REFERRAL VISITS	20
Table 2: REFERRAL COSTS	24

Managing Referrals to Boost Success under Revised Financing at Naval Medical Center Portsmouth

#### Introduction

Naval Medical Center Portsmouth (NMCP) is, as its vision states, the "First and Finest". This institution is the testing ground for many of Naval Medicine's newly implemented policies and procedures. The modern and extensive Charette Health Care Center offers an impressive array of medical services and is well poised to meet the needs of its nearly half-million military beneficiaries well into the next century (NMCP, 2003).

On the forefront of Naval Medicine, NMCP was one of the first to implement what is known as "Revised Financing". The concept of Revised Financing is the imminent future of how Military Treatment Facility (MTF) Commanders will be accountable for those costs associated with medical care that is rendered to beneficiaries outside of its facility. The Naval Medical Center is a leader in implementing Revised Financing concepts and is actively exploring ways to improve its standing by further reducing the amount of direct care dollars unnecessarily spent in the community on health care.

Conditions Which Prompted the Study

Naval Medical Center Portsmouth has undertaken the tremendous challenge of conducting business reviews of all of

its clinics. The Commander of NMCP Portsmouth conducted these meetings to ensure that every Directorate had the same vision. The comprehensive business plans were presented to the clinics with several follow-up meetings as well. These reviews are the beginning of a process to build trust and improve efficiencies without compromising quality throughout the organization. The relationship between physicians and administration is of great concern, with different perspectives and lack of trust between the two (Winyard, 2003). This process can be achieved by identifying capacity measures and trending information over time, with the goal of improving efficiency through increased output and lower network referrals for prime patients.

In implementing these business plans, NMCP Directorates have worked together to keep procedures from going to the network. The leadership has brought everyone together to achieve these goals. An example is General Surgery now performs scopes and other surgical procedures for the Gastroenterology Clinic. This enables the Gastroenterology Clinic to focus on more specialized and costly procedures. As the rest of Naval Medicine readies themselves to implement the business practices of revised financing into their business strategy, NMCP is seeking to improve its standing. Using best business strategies under the current resource constraints, controlled and logical changes

that managing supply and demand can achieve major improvements in providing health care (Murray and Berick, 2003).

Naval Medicine has provided quality medical care to its beneficiaries; however, it has struggled in its ability to show that providing health care can be done for a reasonable cost. With the rising costs of medical care, an ever-tightening Navy budget, and the possibility of Naval Medicine finding itself obsolete or a burden due to its exorbitant high costs, NMCP has undertaken a journey to become a leader in its fiscal management of the many resources that it has been afforded.

To this end, this study will take a look at three clinics; Cardiology, Orthopedics and Gastroenterology, and how the clinics have sought ways to minimize the number of referrals to the civilian network while treating as many of its beneficiaries as possible within the MTF.

These three clinics were chosen because of guidance from the Healthcare Business Operations Directorate and their large footprint in the commands revised financing dollars.

Additionally, they were chosen for their potential to recapture lost revenue for the organization. These three clinics were also selected to narrow the scope of this study due to the size of NMCP. Once completed, this study can be expanded to include the medical center as a whole.

Statement of the Problems

What is the most effective referral management system for NMCP to maximize its direct care dollars and reduce its Revised Financing costs? What metrics, mechanisms and strategies need to be developed to identify shortfalls in the current system? Are the specialty clinics meeting the needs of its population as defined in this paper? What savings have been realized in Revised Financing dollars? Does demand for specialty care exceed the capacity/capability of NMCP? How do referrals impact Prime enrollment?

#### Literature Review

Limiting the number of referrals going out to the network has been a monumental and challenging effort by NMCP. Taking the steps necessary to proactively manage specialty referrals is a critical role in any program (Harrington, Dopf and Chalgren, 2001). To make a successful business change within an organization it is important to involve all aspects of the organization. Hospitals should include physicians in the discussions to help determine purchases or policies and always encourage data driven selection process (Baker, Smithson, Schmitt, Schaefer and Reichert, 2003).

This process will allow NMCP to control the number of referrals to limit the loss of revenue. Effective communication

between physicians and administrators is a critical role in managing referrals (Creason, 2001).

To achieve success, it is imperative to look at the factors that have influenced and are shaping the future of Military Medicine's financial strategy and the processes that are impacted in the implementation of new procedures.

Revised Financing. Revised financing is a term that is becoming well known throughout the Military Health System. The Naval Medical Center has been one of the test sites for Revised Financing and has an advantage over many MTF's in that it has been using this practice already.

Many MTF's have been unable to control the amount of direct care dollars that are being spent right now on care outside of their facility. Revised Financing brings this point to the forefront of the commands attention, because it hits them hardest where it counts, the commands budget. Revised Financing is the amount of money the MTF is responsible for when active duty or TRICARE Prime enrollees receive care outside the military facility (Huffman, 2000).

With the MTF's direct care dollars at risk, measures must be undertaken to keep all Prime enrollees within the MTF.

Unfortunately, due to emergent situations, capability and capacity, there may be instances where leakage to the network is

unavoidable. However, the MTF must take the appropriate steps to limit the number of referrals going to the network.

Marketing. The marketing aspect of the referral process improvement is multi-faceted. First, it should be presented to the staff who writes the consults and those who manage the appointing system. The medical providers are the first line of defense in keeping patients from being seen out in civilian facilities. Using appropriate clinical guidelines, ensuring the referral is medically necessary is paramount in controlling rising health care costs.

Providing the correct templates and appropriate staffing levels are a must in reducing and eliminating Revised Financing costs. When the leadership of an organization is aware of the needs of its staff, change can be implemented so the staff will accept the new process (Nemeth, 2003). Direct staff involvement in the changes increases the chance of success.

Second, the changes should be presented to the patients so they can be well informed and educated on the potential benefit of staying within the Naval Medicine system rather than being seen at a civilian health care facility.

Coding. One of the biggest obstacles the MTF's are addressing is the issue of coding. The Military Health System is tasked with the challenge of improving its coding to help justify and clarify what are the costs associated with a certain

procedure. Coding is a complex process, which requires training and skill (Prophet-Bowman, 2003). This process looks at a patient's visit to a medical facility and attaches a cost for the various procedures a patient encounters.

Through improved coding, an organization can realize significant increase in revenue for the organization.

Conversely, an organization can see a dramatic increase in its costs due to improved coding by an outside medical institution that provided treatment for patients the organization was financially responsible for.

Organizations should place a significant emphasis on the coding process and the value of retaining its direct care dollars. Furthermore, the organization should review the coding practices of other medical institutions that may treat its patients to ensure accuracy and applicability.

TRICARE Contracts. TRICARE is a managed care support contract utilized by the Military Health System to provide care for its beneficiaries. The beneficiaries to the Military Health System are active duty military and their dependents. Service members who have retired and their dependents may meet the eligibility requirements. The benefit is achieved through care delivered by the MTF or by a point of service option to receive care at a provider of choice.

TRICARE brings together the resources of all branches of service, as well as a civilian network to provide quality care and improved access (TRICARE, 2003). The current TRICARE contracts will end in the summer of 2004. How the new contracts will affect the referral process is unknown at this time.

Initially, it appears the structure provides financial incentive for the contractor to refer all eligible patients to the MTF for specialty care. This structure will help bring patients back to the MTF, because it has a direct financial incentive benefit to the contractor, as well as lowering the amount of Revised Financing dollars spent by the MTF on care that would have been utilized in the network. If this holds true, we should see a decrease in the number of patients seen outside the network and an increase in the number of patients treated in the MTF.

If all variables remain constant with the new system, the amount spent on Revised Financing dollars should decrease with fewer patients seen out of the network. The possible variables that could impact the amount of Revised Financing dollars spent are discussed in the results and conclusion of this paper.

Access. Access to care is a crucial element in eliminating the possibility of referrals leaving the MTF. When an organization can improve its health care access it is heading in the right direction to improving its health care (Berry, Seiders)

and Wilder, 2003). Providing appropriate and timely access has a profound effect on a patient's perception of quality.

An integral part of the health care system, access is a cornerstone to successful health care delivery (Shi and Singh, 2001). Open Access is the concept of seeing today's patients today (TRICARE, 2003).

Throughout the military health system, open access is being implemented to reduce the backlog of patients who are waiting for appointments. Doing today's work today is a great concept that can improve the quality of care received and also can aid in the loss of referrals from the MTF to the health care network.

NMCP is in the process of implementing open access in some of the clinics in the hospital to better serve the population with seeing today's patients today.

#### Purpose

The purpose of this study is to validate the gains that have been made through the business plans implemented by NMCP and to provide a foundation for further studies, which would examine the methods and procedures implemented to manage referrals and limit the necessity of patients seeking medical care outside the MTF.

This necessity is driven by the fiscal constraints placed on Naval Medicine and its ability to show that can provide quality medical care at a reasonable cost given its mission.

## Methods and Procedures

This study looks at data obtained through the Healthcare
Business Operations Directorate. Data was retrieved from the
Non-MTF (NLOG) report that pulls information from the Composite
Health Care System (CHCS).

Data was pulled from the MHS Data Mart (M2) data system to look at costs to the MTF. M2 is a 'live' data collection tool that gives the MTF the ability to look at data retrospectively to perform trend analysis, profile studies and provide the organization with a beneficial way of incorporating business case studies to run a financially sound organization.

Forecast

The data analyzed was collected from August 2002 through
February 2004. The study looks at 12 months prior to the
implementation of the business plans and 7 months after
implementation. This time period was chosen to adequately trend
the data, since the partial implementation of the business plans
began around the time frame of August 2003, with full
implementation of the plans occurring by October 2003.

The experimental design is a comparison of before and after the implementation of the business plans. The population the

data are derived from is the non-active duty Prime patients enrolled to NMCP. The data does not count Durable Medical Equipment (DME) visits, such as a halter monitor from Cardiology.

CHCS is the system that was used to gather the workload data for the three specified clinics. The number of patients referred to the network from the clinics were charted to notice any deviations or trends. Additionally, data were gathered from M2 for the number of referrals sent to the network, as well as the associated costs. An analysis was conducted to determine the progress of the individual clinic.

This study analyzed the potential savings the command can or possibly has recouped. Additionally, it provides an analysis of potential loss of revenue that may be recaptured since the implementation of the business plans for each of the clinics.

The statistics for this study provide a one-way analysis of variance and descriptive statistics for the dependent variables, referral visits and referral costs. These statistics were chosen to provide descriptive statistics as well as show the statistical significance or lack thereof in the changes that each of the clinics have made.

Data were coded as binary with the following criteria.

There are two measures in this study, referral visits and referral costs which are the dependent variables (Y). The

independent variable (X) is the time period August 2002 to July 2003 coded 0 and the time period August 2003 to February 2004 coded 1. The controls for this study were limited to outpatient visits only. The Orthopedics Clinic will include Podiatry, as it is a department that falls under its umbrella and has a significant number of past referrals. A minimal number of inpatient visits would be referred to the network.

The information gained from this analysis can be used to verify the capability/capacity as defined by the current business plans set up by each of the clinic directors and the health care business office. Changes in business practice will help in getting physician buy-in and confidence in the validity of the new management methods (Kerr, Mittman, Siu, Leake and Brook, 1995).

This analysis will make NMCP clinics aware of the possibilities to recapture the specialty visits otherwise referred to the network.

#### Ethical Concerns

To ensure patient privacy, all patient-identifying data was removed prior to use in this study. NMCP participation in this endeavor is purely voluntary.

#### Data Reliability

As with any study, the data reliability is of great concern. Every possible effort has been made in this analysis of

data from M2 and CHCS to maintain its reliability through the utmost care in researching it. Depending on how it is pulled from M2, the exact data will prove extremely hard to duplicate as it is continually being updated.

The potential for error exists with the use of any system. However, M2 and CHCS, the sources that have been utilized, are the best that are available. Every attempt will be made to verify the information with the health care business office at NMCP.

#### Results

#### Referral Patterns

The results of this study are interesting because the findings show the complexity of the military health system. The three clinics that were studied; Orthopedics, Gastroenterology and Cardiology, showed varying degrees of improvement.

Historical information was analyzed to see what, if any, of the implementations of better business practices at NMCP has made an impact on the number of patients who are referred to the network instead of receiving appointments at the MTF.

Since the guidelines have been in place, NMCP clinics have made a consistent effort to screen all consults and increase the clinic templates and productivity of the providers to ensure the cases that should be seen in the clinic are not referred to the network.

Additionally, clinics are making an effort to recapture patients who have been referred to the network for their care. This is achieved through clinic administrative personnel calling patients before they have gone to their network appointment, trying to recapture them in an available NMCP clinic visit.

The NMCP health care business office tracks the number of patients referred to the network and the information is given to the Executive Steering Committee (ESC) monthly.

The information is used to monitor the progress each clinic is making in the reduction of referrals to the network.

Table 1
Referral Visits

Orthopedics	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL
Aug Fy02 - Jul Fy03	115	115	168	144	174	192	108	99	70	63	65	52
Aug Fy03 - Feb Fy04	92	125	126	113	83	41	17					
Gastroenterology												
Aug Fy02 - Jul Fy03	53	50	62	67	55	76	50	93	115	81	60	63
Aug Fy03 - Feb Fy04	70	114	96	57	77	39	27					
Cardiology												
Aug Fy02 - Jul Fy03	49	67	52	42	25	39	69	82	46	22	51	47
Aug Fy03 - Feb Fy04	32	6	10	7	9	9	1					

Table 1 shows the three clinics looked at in this study and their corresponding referrals from August 2002 through February 2004. Again, this time frame was looked at because of the implementation of the business plans around August fiscal year 2003.

The number of referrals by the three clinics; Orthopedics, Gastroenterology and Cardiology, will also be seen individually in figures 1, 2 and 3 respectively. The Orthopedic Clinic had a mean number of visits of 113.75 for the time period August 2002 to July 2003, and a mean number of visits of 85.28 for the time period August 2003 to February 2004. The ANOVA showed F = 1.729, p = .206 (ns). The results show no significance in the reduction of the Orthopedic Clinics number of visits. Although, there was no significance it is apparent that the clinics visits are on a downward trend.

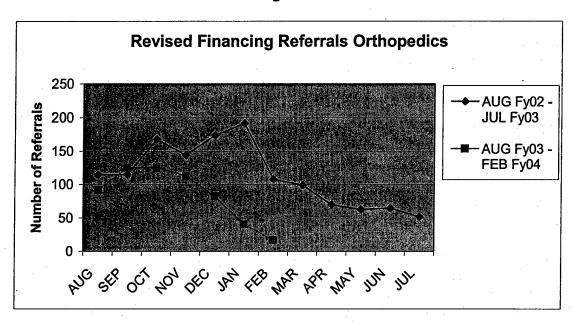


Figure 1

Figure 1 illustrates the overall decrease in referrals to the network for Orthopedics. The Orthopedic Clinic saw a slight increase in referrals prior to fiscal year 2003. Since the beginning of fiscal year 2003 and the full implementation of the business plans, referrals have continued a steady downward trend to a new low in February 2004 of just 17 referrals.

Likewise, Figure 2 illustrates the overall decrease in referrals to the network for Gastroeneterology. This clinic also

experienced an increase in the number of referrals in September and October 2003, then a continued steady decline, until it reached its low point of 27 in February 2004.

The Gastroenterology Clinic had a mean number of visits of 68.75 for the time period August 2002 to July 2003, and a mean number of visits, 68.57 for the time period August 2003 to February 2004. The ANOVA showed F = 0.000, p = .988 (ns). The results show that there is no significance in the reduction of the Gastroenterology Clinics number of visits. However, with a large spike in the number of referrals in September 2003, the trend in reducing the number of visits is steadily decreasing.

Gastroenterology has been plagued by a reduction in personnel, but has significantly increased its production to see its network referrals drop. Additionally, Gastroenterology has been very successful at recapturing visits that had been previously dispositioned to the network.

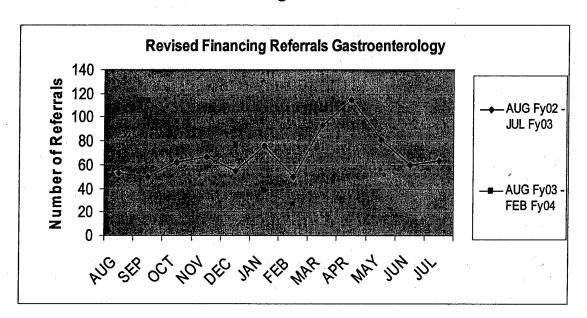


Figure 2

The third clinic studied is Cardiology, and it shows the most dramatic decrease in number of referrals and the maintenance of that reduction.

The Cardiology Clinic had a mean number of visits of 49.25 for the time period August 2002 to July 2003, and a mean number of visits, 10.57 for the time period August 2003 to February 2004. The ANOVA showed F = 28.96, p < .001. The results show that there is a significant reduction in the number of visits at the Cardiology Clinic, (p < .001).

In Figure 3, Cardiology began its decrease in the number of referrals in September 2003 and was able to maintain at or below ten referrals per month with them reaching their lowest number in February 2004, with just one referral going to the network. This dramatic reduction of visits over the previous years high of 82 visits in March 2003 signifies a truly remarkable feat that was achieved through the hard work and diligence of the NMCP staff.

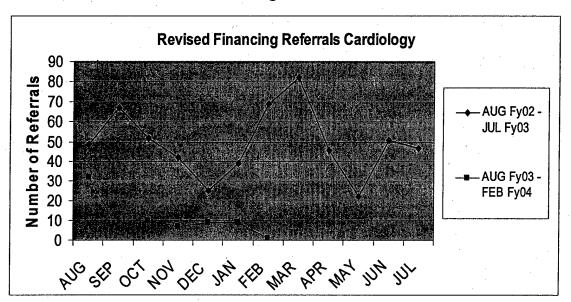


Figure 3

The accomplishments of the Orthopedics, Gastroenterology and Cardiology Clinics have been tremendous in reducing the number of referrals sent to the network as evidenced by the three previous charts.

#### Referral Costs

Equally, if not more important than the number of referrals sent to the network, is the reduction of costs the clinics have paid to the network. The associated network referral costs are shown in Table 2 for each of the three clinics.

# Table 2

#### Referral Costs

Orthopedic NOV DEC JAN **FEB** MAR APR JUN SEP OCT MAY Costs AUG Aug Fy02 -Jul Fy03 13945 14051 16618 19612 19145 32036 19743 18636 25548 19743 15257 22594 Aug Fy03 -Feb Fy04 14765 12775 17109 18930 12477 12423 3269 Gastroenterology Costs Aug Fy02 -Jul Fy03 7038 8858 34571 45449 38037 37084 36755 38319 43380 56491 42652 57757 Aug Fy03 -Feb Fy04 49044 57650 75634 50800 25795 31195 10657 Cardiology Costs Aug Fy02 -Jul Fy03 1241 1244 17012 18513 11233 12350 15933 13472 19806 15625 9025 24283 Feb Fy04 27267 19211 56159 14366 17444 15690 1134

Table 2 shows the three clinics looked at in this study, but the focus is on their corresponding referral costs from August 2002 through February 2004.

The referral costs of Orthopedics, Gastroenterology and

Cardiology will also be seen individually in Figures 4, 5 and 6 respectively.

The statistics for this study provide a one-way analysis of variance and descriptive statistics for referral visits and referral costs. This study found that the significance for the three clinics varied.

The Orthopedic Clinic had a mean cost of \$19,744 for the time period August 2002 to July 2003, and a mean of \$13,106 for the time period August 2003 to February 2004. The ANOVA showed F = 7.50, p = .014. The results show significance in the reduction of the Orthopedic Clinics costs.

The results of the referral costs are improving, although not as dramatic or to the same extent as what we have previously seen with the decrease in the number of referrals from the three clinics.

Figure 4

Figure 4 appears to show that fiscal year 2002 to 2003 data initially mimic that of fiscal year 2003 to 2004. Please note that December 2003 marked the beginning of the decline in the amount of costs that the Orthopedics Clinic is accruing.

In Figure 5, the data shows Gastroenterology had incurred peak costs in August through October 2003 with the highest amount of costs for a month totaling more than \$75,000.

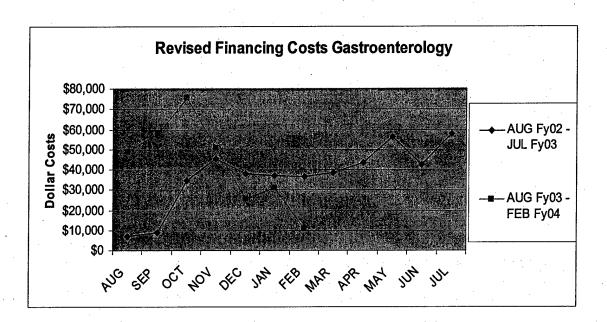


Figure 5

The Gastroenterology Clinic had a mean cost of \$37,199 for the time period August 2002 to July 2003, and a mean of \$42,967 for the time period August 2003 to February 2004. The ANOVA showed F = .454, p = .510 (ns). There was not a significant reduction in the costs of the Gastroenterology Clinic. There was actually an increase in the mean cost for this clinic. However, the trend in lowering costs is improving.

The Gastroenterology Clinic data, however, does show that the clinic has made a steady turn downward as seen in the data trend continued in November and December 2003.

The Cardiology Clinic data in Figure 6 displays a large spike in costs in October 2003. After this anomaly, the data evens out on a normal progression with it seeing a decrease in February 2004.

The Cardiology Clinic had a mean cost of \$13,311 for the time period August 2002 to July 2003, and a mean of \$21,610 for the time period August 2003 to February 2004. The ANOVA showed F = .2.264, p = .151(ns). There was not a significant reduction in the costs of the Cardiology Clinic. There was actually an increase in the mean cost for this clinic. However, the trend in lowering costs is improving.

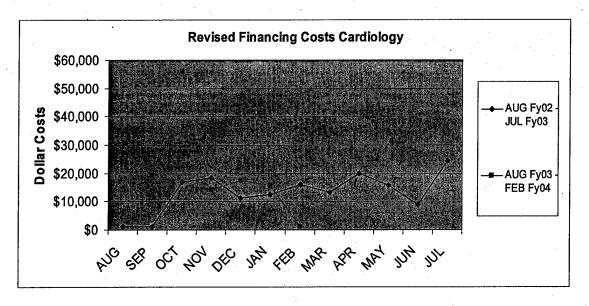


Figure 6

#### Discussion

This study has been interesting because throughout the course of it, there has been a shift in the way the Naval Medical Center Portsmouth handles its referrals due to the implementation of business plans throughout its clinics.

The three clinics chosen for the study; Orthopedics, Gastroenterology and Cardiology, have greatly reduced the number of referrals sent to the network. This is a great credit to the staff that has increased their patient workload to keep the referrals from being sent to the network.

For each clinic, the data presents a dramatic drop in costs in December, January and February. However, this decrease is misleading, because the posting of the bills attributed to each clinic can be significantly delayed. The billing can be delayed for several reasons. The different variables include, accounts payable from network providers being slow, unforeseen delays in episodes of care and incorrect payment to providers delaying appropriate and timely payment from higher authority. These are just a few of the potential delays in posting accurate costs to the clinics.

#### Orthopedics

The Orthopedic Clinic has shown a steady improvement in the number of referrals to the network. I believe they should be able to continue this trend of declining referrals.

The costs for referrals for Orthopedics have continued on the same pattern in fiscal year 2004 as it did in 2003, with perhaps a turn downward in December 2003.

# *Gastroenterology*

Likewise, the Gastroenterology Clinic has shown a decrease in the number of referrals it has sent to the network. This decrease has held its downward trend with only a slight increase in December 2003.

Gastroenterology's costs were very high early in fiscal year 2003 and also have rapidly fallen off. The high cost spike was due to a large number of referrals as a result of staff reduction. Since the implementation of the business plans, the staff has limited the number of referrals to its lowest point yet.

# Cardiology

The Cardiology Clinic has seen the greatest sustained decrease in the number of referrals to the network, with achieving fewer than 10 referrals for the past six months.

Cardiology had a spike in costs in October 2003, because a patient required unusually expensive procedures. Since that time, their costs have dropped to a consistent level.

As the clinics continue to limit their referrals they will achieve a significant savings in the amount of money spent on referrals. One factor that interferes with full recapture of workload to the MTF is the number of visits that have been authorized from previous referrals. For continuity of care purposes, patients already deferred to the network may have a number of visits left to complete their episode of care with a provider. These bills will continue to hit the billing invoice until the authorized visits expire. Only then will NMCP fully

realize all of the true savings.

In the next few months, I firmly believe the clinics will start to achieve more significant decreases in costs as evidenced by the current reduction in referrals to the network. When the number of visits that have been authorized from previous referrals expires, NMCP will then see a decrease in costs. There are several ways that the referral visits expire. The first is the number of visits authorized on that referral expire; the second is that referrals expire automatically at the one year mark; or the referral expires on a specified date within that I year period as dictated by the referring provider.

With regard to the rationale provided above, it is anticipated that fiscal year 2005 will be the banner year for NMCP diminished revised financing costs.

### Conclusion

It is truly evident that through great leadership, change can take place. I believe the executive leadership at NMCP truly has made a difference in the way NMCP conducts business, and NMCP has and will continue to lead the way for Naval Medicine in the reduction of network costs.

The Orthopedics Clinic has seen a dramatic change in referrals, ranging from a high of 192 to just 17. The Gastroenterology Clinic has seen similar success, from a high of 116 referrals to 27. The Cardiology Clinic has almost eliminated its referrals, from a high of 82 to just 1 referral for the month of February.

The three clinics have made tremendous advances in their

ability to limit the number of referrals. The drop in the monthly cost of referrals will steadily fall to be more of a direct reflection of the decreasing number of referrals.

Although, the statistical analysis did not always prove significant results the direction the clinics are heading has improved. With further analysis, and the number of referrals decreasing eventually NMCP will see greater results.

## Recommendations

As NMCP continues on its path toward reducing the number of referrals to the network, it must continue to track referrals and their associated costs. Within the tracking of referrals, a real emphasis should be placed on those referrals with multiple visits. Specifically, the number of authorized visits per referral needs to be scrutinized by the referring provider and follow-up by the MTF to ensure cost management without compromising quality of care.

There are a still a few things that can limit the realized savings of recapturing network referrals. These include but are not limited to inflation, increased ancillary costs (e.g. pharmaceuticals), better coding through improved computer programs that help civilian physicians code to the highest reimbursement level possible, staffing shortages, deployments and the lack of capability to perform certain types of care or procedures in the medical facility. NMCP must continue to be vigilant in its quest to continue to be the finest medical facility in the military.

Since this process has been underway for less than a year, I

believe there is potential for future study to include the financial impact of implementing clinical pathways and, relocating specialty providers to clinics where there is demand for care.

#### References

- Baker, S., Smithson, K., Schmitt, S., Schaefer, E., & Reichert,
  J. (2003). Just What the Doctor Ordered. Health Care
  Financial Management, 70-74.
- Berry, L., Seiders, K., & Wilder, S. (2003). Innovations in Access to Care: A Patient-Centered Approach. Annals of Internal Medicine, 139(7), 568-574
- Creason, H. (2001). Congestive Heart Failure Telemanagement Clinic. Lippincott's Case Management, 6(4), 146-156.
- Harrington, J., Dopf, C., & Chalgren, C. (2001). Implementing
  Guidelines for Interdisciplinary Care of Lower Back Pain: A
  Critical Role for Pre-Appointment Management of Specialty
  Referrals. Joint Commission Journal on Quality
  Improvement, 27(12), 651-653.
- Huffman, S. (2000). Incoming Commanders Brief Naval Medical

  Center Portsmouth. Principles of Revised Financing, Bid

  Price Adjustments, & Resource Sharing in Region 2, 1-42.
- Kerr, E., Mittman, B., Hays, R., Siu, A., Leake, B., & Brook, R. (1995). Managed care and Capitation in California: How Do physicians at Financial Risk Control Their Own Utilization. Annals of Internal Medicine, 123(7), 500-504.
- Murray M., & Berick, D. (2003). Advance Access: Reducing
  Waiting and Delays in Primary Care. The Journal of
  American Medical Association, 289(8), 1035-1040.
- Naval Medical Center Portsmouth. (2003). In Naval Medical

  Center Web Site. Retrieved September 12, 2003, from

  http://www-nmcp.med.navy.mil/

- Nemeth, L. S. (2003). Implementing Change for Effective
  Outcomes. Outcomes Management, 7(3), 134-139.
- Prophet-Bowman, S. (2003). A Primer on ICD-9 Coding. Home

  Health Care Nurse, (21(6), 384-394.
- Shi, L., & Singh, D. (2001). Delivery Health Care in America: A Systems Approach. (2<sup>nd</sup> ed). Aspen Publishers: Gaithersburg, Maryland.
- Tricare. (2003). Taken from the Tricare website.

  http://www.tricare.osd.mil/
- Winyard, G. (2003). Doctors, Managers and Politicians. Clinical Medicine, 3(5), 465-469.